GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: June 25, 2003, 14:20:41 ; Search time 31.2 Seconds
(without alignments)
444.169 Million cell updates/sec

Title: US-09-622-613B-11
Perfect score: 577
Sequence: 1 SDWLTFQKKHLTNTRDVDCN.....TFCVTCENQAPVHFVGVGHC 104

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_101002:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	577	100.0	104	20	AAY28870	Recombinant RaPLR1
2	577	100.0	105	20	AAY28871	Recombinant Met(-1
3	573	99.3	104	20	AAY28865	Rana pipiens liver
4	573	99.3	105	20	AAY28867	Recombinant Met(-1
5	573	99.3	127	20	AAY28879	Rana pipiens Clone
6	570	98.8	104	20	AAY28866	Recombinant RaPLR1
7	570	98.8	105	20	AAY28869	Recombinant Met(-1
8	556	96.4	104	18	AAW06544	Antitumour protein
9	555	96.2	112	18	AAW35118	R. pipiens recombi
10	555	96.2	251	18	AAW35134	R. pipiens recombi
11	555	96.2	254	18	AAW35135	R. pipiens recombi
12	555	96.2	355	18	AAW35129	R. pipiens recombi
13	555	96.2	355	18	AAW35133	R. pipiens recombi
14	555	96.2	366	18	AAW35132	R. pipiens recombi
15	551	95.5	104	12	AAR12344	Protein with activ
16	551	95.5	104	15	AAR47303	ONCONASE (pharmace
17	551	95.5	104	17	AAW00736	Protein derived fr
18	551	95.5	104	18	AAW30301	Recombinant onc pr
19	551	95.5	104	18	AAW06543	Antitumour protein
20	551	95.5	104	18	AAW14065	Onconase (RTM) pro
21	551	95.5	104	20	AAY33322	Frog onconase prot
22	551	95.5	104	20	AAW88233	Rana pipiens RNase
23	551	95.5	104	22	AAB31666	Amino acid sequenc
24	551	95.5	105	18	AAW35123	R. pipiens recombi
25	551	95.5	106	18	AAW35122	R. pipiens recombi
26	551	95.5	107	18	AAW35117	R. pipiens recombi
27	551	95.5	355	18	AAW35125	R. pipiens recombi
28	551	95.5	358	18	AAW35130	R. pipiens recombi
29	551	95.5	379	18	AAW35126	R. pipiens recombi
30	550	95.3	105	18	AAW35116	R. pipiens recombi
31	548	95.0	104	18	AAW30302	Recombinant onc pr
32	548	95.0	105	20	AAY39400	Recombinant frog O
33	546	94.6	104	18	AAW18224	Antitumour generic
34	546	94.6	105	18	AAW35115	R. pipiens recombi
35	546	94.6	358	18	AAW35127	R. pipiens recombi
36	546	94.6	365	18	AAW35131	R. pipiens recombi
37	543	94.1	104	22	AAB31667	Amino acid sequenc
38	531	92.0	107	18	AAW35120	R. pipiens recombi
39	494	85.6	360	18	AAW35128	R. pipiens recombi
40	484.5	84.0	111	18	AAW35121	R. pipiens recombi
41	445	77.1	83	18	AAW35119	R. pipiens clone R
42	445	77.1	83	20	AAW88234	Rana pipiens RNase
43	287	49.7	111	20	AAY33321	Frog lectin protei
44	280.5	48.6	110	20	AAY28877	Recombinant RaCOR1
45	280.5	48.6	111	20	AAY28878	Recombinant Met(-1

ALIGNMENTS

RESULT 1
AAY28870
ID AAY28870 standard; Protein; 104 AA.
XX
AC AAY28870;
XX
DT 25-JAN-2000 (first entry)
XX
DE Recombinant RaPLR1 Gln1Ser amino acid sequence.
XX
KW Recombinant Rana pipiens ribonuclease; RaPLR1 Gln1Ser; covalently bound;
KW LL2 antibody; ligand binding moiety; CD22; cancerous B cell; frog;
KW Kaposi's sarcoma; human chorionic gonadotrophin; hCG; signal peptide;
KW recombinant ribonuclease; cytotoxic fusion protein; cancer; RNase;
KW autoimmune disease.
XX
OS Rana pipiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 1
FT /note= "Wild type Gln replaced with Ser"
XX
PN WO9950398-A2.
XX
PD 07-OCT-1999.
XX
PF 26-MAR-1999; 99WO-US06641.
XX
PR 27-MAR-1998; 98US-0079751.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX

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PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08128.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases -
XX
PS   Claim 34; Page 60; 71pp; English.
XX
CC   The present sequence is a recombinant Rana pipiens ribonuclease (RaPLR1)
CC   protein with Gln1Ser. Carboxy terminal end of recombinant RaPLR1 has a
CC   covalently bound ligand binding moiety, which can be a LL2 antibody
CC   directed against CD22 on cancerous B cells or human chorionic
CC   gonadotrophin (hCG) effective against Kaposi's sarcoma cells. Recombinant
CC   ribonucleases can be expressed in bacteria without an N-terminal
CC   methionine due to the presence of a signal peptide that is cleaved by
CC   bacteria. The soluble expression of ribonuclease allows the proteins to
CC   be fused in-frame with ligand binding moieties to form cytotoxic fusion
CC   proteins. They can be used for treatment of cancer and autoimmune
CC   diseases.
XX
SQ   Sequence   104 AA;

  Query Match            100.0%;  Score 577;  DB 20;  Length 104;
  Best Local Similarity  100.0%;  Pred. No. 2.9e-62;
  Matches  104;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db          1 SDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 60

Qy         61 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||||||||||||||||||||||||||
Db         61 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104


RESULT 2
AAY28871
ID   AAY28871 standard; Protein; 105 AA.
XX
AC   AAY28871;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Recombinant Met(-1) RaPLR1 Gln1Ser amino acid sequence.
XX
KW   Recombinant Met(-1) Rana pipiens ribonuclease Gln1Ser; RaPLR1; CD22;
KW   covalently bound; LL2 antibody; ligand binding moiety; cancerous B cell;
KW   Kaposi's sarcoma; human chorionic gonadotrophin; hCG; signal peptide;
KW   recombinant ribonuclease; cytotoxic fusion protein; cancer; frog;
KW   autoimmune disease; RNase.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 1
FT                   /note= "Met not found in wild type RaPLR1"
FT   Misc-difference 2
FT                   /note= "Wild type Gln replaced with Ser"
XX
PN   WO9950398-A2.
XX
PD   07-OCT-1999.
XX
PF   26-MAR-1999;   99WO-US06641.
XX
PR   27-MAR-1998;   98US-0079751.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08129.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases -
XX
PS   Claim 34; Page 61; 71pp; English.
XX
CC   The present sequence is a recombinant Rana pipiens ribonuclease (RaPLR1)
CC   protein with Met at position 1 and Gln2Ser. Carboxy terminal end of
CC   recombinant RaPLR1 has a covalently bound ligand binding moiety, which
CC   can be a LL2 antibody directed against CD22 on cancerous B cells or human
CC   chorionic gonadotrophin (hCG) effective against Kaposi's sarcoma cells.
CC   Recombinant ribonucleases can be expressed in bacteria without an N-
CC   terminal methionine due to the presence of a signal peptide that is
CC   cleaved by bacteria. The soluble expression of ribonuclease allows the
CC   proteins to be fused in-frame with ligand binding moieties to form
CC   cytotoxic fusion proteins. They can be used for treatment of cancer and
CC   autoimmune diseases.
XX
SQ   Sequence   105 AA;

  Query Match            100.0%;  Score 577;  DB 20;  Length 105;
  Best Local Similarity  100.0%;  Pred. No. 3e-62;
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Db          2 SDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 61

Qy         61 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
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Db         62 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105


RESULT 3
AAY28865
ID   AAY28865 standard; Protein; 104 AA.
XX
AC   AAY28865;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Rana pipiens liver ribonuclease (RaPLR1).
XX
KW   Rana pipiens liver ribonuclease; RaPLR1; covalently bound; LL2 antibody;
KW   ligand binding moiety; CD22; cancerous B cell; Kaposi's Sarcoma; frog;
KW   human chorionic gonadotrophin; hCG; recombinant ribonuclease; RNase;
KW   signal peptide; cytotoxic fusion protein; cancer; autoimmune disease.
XX
OS   Rana pipiens.
XX
PN   WO9950398-A2.
XX
PD   07-OCT-1999.
XX
PF   26-MAR-1999;   99WO-US06641.
XX
PR   27-MAR-1998;   98US-0079751.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08124.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases -
XX
PS   Claim 1; Page 55; 71pp; English.
XX
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CC   The present sequence is Rana pipiens liver ribonuclease (RaPLR1)
CC   protein. Carboxy terminal end of RaPLR1 has a covalently bound
CC   ligand binding moiety, which can be a LL2 antibody directed against
CC   CD22 on cancerous B cells or human chorionic gonadotrophin (hCG)
CC   effective against Kaposi's Sarcoma cells. Recombinant ribonucleases can
CC   be expressed in bacteria without an N-terminal methionine due to the
CC   presence of a signal peptide that is cleaved by bacteria. The soluble
CC   expression of ribonuclease allows the proteins to be fused in-frame with
CC   ligand binding moieties to form cytotoxic fusion proteins. They can be
CC   used for treatment of cancer and autoimmune diseases.
XX
SQ   Sequence   104 AA;

  Query Match             99.3%;  Score 573;  DB 20;  Length 104;
  Best Local Similarity   100.0%;  Pred. No. 9e-62;
  Matches  103;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db          2 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 61

Qy         62 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||||||||||||||||||||||||
Db         62 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104


RESULT 4
AAY28867
ID   AAY28867 standard; Protein; 105 AA.
XX
AC   AAY28867;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Recombinant Met(-1) RaPLR1.
XX
KW   Recombinant Met(-1) Rana pipiens ribonuclease; RaPLR1; CD22; RNase;
KW   covalently bound; LL2 antibody; ligand binding moiety; cancerous B cell;
KW   Kaposi's sarcoma; human chorionic gonadotrophin; hCG; signal peptide;
KW   recombinant ribonuclease; cytotoxic fusion protein; cancer; frog;
KW   autoimmune disease.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 1
FT                   /note= "Met not found in wild type RaPLR1"
XX
PN   WO9950398-A2.
XX
PD   07-OCT-1999.
XX
PF   26-MAR-1999;   99WO-US06641.
XX
PR   27-MAR-1998;   98US-0079751.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08126.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases  -
XX
PS   Claim 34; Page 57; 71pp; English.
XX
CC   The present sequence is a recombinant Rana pipiens ribonuclease (RaPLR1)
CC   protein with Met at position 1. Carboxy terminal end of recombinant
CC   RaPLR1 has a covalently bound ligand binding moiety, which can be a LL2
CC   antibody directed against CD22 on cancerous B cells or human chorionic
CC   gonadotrophin (hCG) effective against Kaposi's sarcoma cells. Recombinant
CC   ribonucleases can be expressed in bacteria without an N-terminal
CC   methionine due to the presence of a signal peptide that is cleaved by
CC   bacteria. The soluble expression of ribonuclease allows the proteins to
CC   be fused in-frame with ligand binding moieties to form cytotoxic fusion
CC   proteins. They can be used for treatment of cancer and autoimmune
CC   diseases.
XX
SQ   Sequence   105 AA;

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Db         63 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105


RESULT 5
AAY28879
ID   AAY28879 standard; Protein; 127 AA.
XX
AC   AAY28879;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Rana pipiens Clone 5a1b ribonuclease.
XX
KW   Rana pipiens ribonuclease Clone 5a1b; RaPLR1; covalently bound; RNase;
KW   LL2 antibody; ligand binding moiety; CD22; cancerous B cell; onconase;
KW   Kaposi's Sarcoma; human chorionic gonadotrophin; hCG; cancer;
KW   recombinant ribonuclease; frog; signal peptide; cytotoxic fusion protein;
KW   autoimmune disease.
XX
OS   Rana pipiens.
XX
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XX
PN   WO9950398-A2.
XX
PD   07-OCT-1999.
XX
PF   26-MAR-1999;   99WO-US06641.
XX
PR   27-MAR-1998;   98US-0079751.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08136.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases  -
XX
PS   Disclosure; Page 69; 71pp; English.
XX
CC   The present sequence is a Rana pipiens Clone 5a1b ribonuclease (RaPLR1).
CC   It is encoded by Clone 5a1b cDNA obtained from Rana pipiens liver mRNA
CC   library. It exhibits differences with Onconase (RTM) at amino acid
CC   residues 11, 20, 85 and 103. Carboxy terminal end of RaPLR1 has a
CC   covalently bound ligand binding moiety, which can be a LL2 antibody
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CC   directed against CD22 on cancerous B cells or human chorionic
CC   gonadotrophin (hCG) effective against Kaposi's Sarcoma cells. Recombinant
CC   ribonucleases can be expressed in bacteria without an N-terminal
CC   methionine due to the presence of a signal peptide that is cleaved by
CC   bacteria. The soluble expression of ribonuclease allows the proteins to
CC   be fused in-frame with ligand binding moieties to form cytotoxic fusion
CC   proteins. They can be used for treatment of cancer and autoimmune
CC   diseases.
XX
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Db         25 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 84

Qy         62 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||||||||||||||||||||||||
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RESULT 6
AAY28866
ID   AAY28866 standard; Protein; 104 AA.
XX
AC   AAY28866;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Recombinant RaPLR1 Met23Leu amino acid sequence.
XX
KW   Recombinant Rana pipiens ribonuclease; RaPLR1 Met23Leu; covalently bound;
KW   LL2 antibody; ligand binding moiety; CD22; cancerous B cell; RNase;
KW   Kaposi's sarcoma; human chorionic gonadotrophin; hCG; signal peptide;
KW   recombinant ribonuclease; cytotoxic fusion protein; cancer; frog;
KW   autoimmune disease.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 23
FT                   /note= "Wild type Met replaced with Leu"
XX
PN   WO9950398-A2.
XX
PD   07-OCT-1999.
XX
PF   26-MAR-1999;   99WO-US06641.
XX
PR   27-MAR-1998;   98US-0079751.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08125.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases  -
XX
PS   Claim 34; Page 56; 71pp; English.
XX
CC   The present sequence is a recombinant Rana pipiens ribonuclease (RaPLR1)
CC   protein with Met23Leu. Carboxy terminal end of recombinant RaPLR1 has a
CC   covalently bound ligand binding moiety, which can be a LL2 antibody
CC   directed against CD22 on cancerous B cells or human chorionic
CC   gonadotrophin (hCG) effective against Kaposi's sarcoma cells. Recombinant
CC   ribonucleases can be expressed in bacteria without an N-terminal
CC   methionine due to the presence of a signal peptide that is cleaved by
CC   bacteria. The soluble expression of ribonuclease allows the proteins to
CC   be fused in-frame with ligand binding moieties to form cytotoxic fusion
CC   proteins. They can be used for treatment of cancer and autoimmune
CC   diseases.
XX
SQ   Sequence   104 AA;

  Query Match             98.8%;  Score 570;  DB 20;  Length 104;
  Best Local Similarity   99.0%;  Pred. No. 2.1e-61;
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Qy          2 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 61
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Qy         62 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
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Db         62 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104


RESULT 7
AAY28869
ID   AAY28869 standard; Protein; 105 AA.
XX
AC   AAY28869;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Recombinant Met(-1) RaPLR1 Met23Leu-(His)6 protein.
XX
KW   Recombinant Met(-1) Rana pipiens ribonuclease Met23Leu-(His)6; RaPLR1;
KW   CD22; covalently bound; LL2 antibody; ligand binding moiety; RNase;
KW   cancerous B cell; Kaposi's sarcoma; human chorionic gonadotrophin; hCG;
KW   signal peptide; recombinant ribonuclease; cytotoxic fusion protein;
KW   cancer; frog; autoimmune disease.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 1
FT                   /note= "(His)6 histidine tag attached to N-terminal Met"
FT   Misc-difference 1
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FT                   /note= "Wild type Met replaced with Leu"
XX
PN   WO9950398-A2.
XX
PD   07-OCT-1999.
XX
PF   26-MAR-1999;   99WO-US06641.
XX
PR   27-MAR-1998;   98US-0079751.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08127.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases  -
XX
PS   Claim 4; Page 59; 71pp; English.
XX
CC   The present sequence is a recombinant Rana pipiens ribonuclease protein
CC   (RaPLR1) with Met at position 1 attached to (His)6 tag and Met24Leu.
CC   Carboxy terminal end of recombinant RaPLR1 has a covalently bound ligand
CC   binding moiety, which can be a LL2 antibody directed against CD22 on
CC   cancerous B cells or human chorionic gonadotrophin (hCG) effective
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CC   against Kaposi's sarcoma cells. Recombinant ribonucleases can be
CC   expressed in bacteria without an N-terminal methionine due to the
CC   presence of a signal peptide that is cleaved by bacteria. The soluble
CC   expression of ribonuclease allows the proteins to be fused in-frame with
CC   ligand binding moieties to form cytotoxic fusion proteins. They can be
CC   used for treatment of cancer and autoimmune diseases.
XX
SQ   Sequence   105 AA;

  Query Match             98.8%;  Score 570;  DB 20;  Length 105;
  Best Local Similarity   99.0%;  Pred. No. 2.1e-61;
  Matches  102;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 61
              |||||||||||||||||||:|||||||||||||||||||||||||||||||||||||||
Db          3 DWLTFQKKHLTNTRDVDCNNILSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 62

Qy         62 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||||||||||||||||||||||||
Db         63 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105


RESULT 8
AAW06544
ID   AAW06544 standard; protein; 104 AA.
XX
AC   AAW06544;
XX
DT   22-AUG-1997  (first entry)
XX
DE   Antitumour protein from Rana pipiens oocytes.
XX
KW   Tumour; chemotherapy; radiotherapy; frog.
XX
OS   Rana pipiens.
XX
PN   WO9639428-A1.
XX
PD   12-DEC-1996.
XX
PF   03-JUN-1996;   96WO-US08304.
XX
PR   06-JUN-1995;   95US-0467955.
XX
PA   (ALFA-) ALFACELL CORP.
XX
PI   Ardelt WJ;
XX
DR   WPI; 1997-043063/04.
XX
PT   Antitumour protein from Rana pipiens oocyte(s) - have fewer
PT   disadvantages than chemotherapy, surgery and radiotherapy
XX
PS   Claim 8; Page 28; 45pp; English.
XX
CC   The present sequence is a specifically claimed example of an
CC   antitumour protein from the generic protein in AAW18224, with the
CC   molecular weight 12000. This is one of two preferred proteins (the
CC   other in AAW06543) that have been isolated from Rana pipiens oocytes.
CC   Both proteins have a blocked amino terminal group and are essentially
CC   free of carbohydrates. The proteins are used to treat tumours. Use of
CC   the peptides has fewer disadvantages than chemotherapy, radiotherapy
CC   and surgery in the treatment of tumours.
XX
SQ   Sequence   104 AA;

  Query Match             96.4%;  Score 556;  DB 18;  Length 104;
  Best Local Similarity   97.1%;  Pred. No. 1e-59;
  Matches  100;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          2 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 61
              |||||||||:|||||||||||||||||||||||||||||||||||||||||||||||||
Db          2 DWLTFQKKEVTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 61

Qy         62 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||||| |||||||||||||||| |
Db         62 EFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGRC 104


RESULT 9
AAW35118
ID   AAW35118 standard; Protein; 112 AA.
XX
AC   AAW35118;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase protein NLSMetSerrOnc.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
PR   21-FEB-1996;   96US-0011800.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Boque L,  Newton DL,  Rybak SM,  Wlodawer A;
XX
DR   WPI; 1997-435168/40.
DR   N-PSDB; AAT94955.
XX
PT   Ribonuclease molecules based on native Onconase - used for killing
PT   cells, particularly tumour cells
XX
PS   Claim 18; Page 63; 90pp; English.
XX
CC   AAW35115 to AAW35123 encode recombinant proteins (rOnc) which are
CC   modifications of the RNase Onconase (RTM) (nOnc). Such novel
CC   ribonuclease molecules are highly cytotoxic and can be used alone or to
CC   form chemical conjugates or to target recombinant immunofusions. They are
CC   used particularly for decreasing tumour cell growth. They can also be
CC   used for cell separation in vitro by selectively killing unwanted types
CC   of cells, e.g. in bone marrow prior to transplantation into a patient
CC   undergoing marrow ablation by radiation, or for killing leukaemia cells
CC   or T-cells that would cause graft versus host disease. The toxins can
CC   also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and also
CC   lower immunogenicity in humans.
XX
SQ   Sequence   112 AA;

  Query Match             96.2%;  Score 555;  DB 18;  Length 112;
  Best Local Similarity   96.2%;  Pred. No. 1.5e-59;
  Matches  100;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 SDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 60
              ||||||||||:|||||||:|||||||||||||||||||||||||||||||||||||||||
Db          9 SDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 68

Qy         61 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||||| |||||||||||||||| |
Db         69 SEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 112


RESULT 10
AAW35134
ID   AAW35134 standard; Protein; 251 AA.
XX
```

```
AC   AAW35134;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase rOnc fusion protein 10.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
PR   21-FEB-1996;   96US-0011800.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Boque L,  Newton DL,  Rybak SM,  Wlodawer A;
XX
DR   WPI; 1997-435168/40.
DR   N-PSDB; AAT94972.
XX
PT   Ribonuclease molecules based on native Onconase - used for killing
PT   cells, particularly tumour cells
XX
PS   Disclosure; Page 76; 90pp; English.
XX
CC   Sequences AAW35125 to AAW35135 represent recombinant fusion proteins
CC   (rOnc) which are modifications of the RNase Onconase (RTM) (nOnc). Such
CC   novel ribonuclease molecules are highly cytotoxic and can be used alone
CC   or to form chemical conjugates or to target recombinant immunofusions.
CC   They are used particularly for decreasing tumour cell growth. They can
CC   also be used for cell separation in vitro by selectively killing unwanted
CC   types of cells, e.g. in bone marrow prior to transplantation into a
CC   patient undergoing marrow ablation by radiation, or for killing leukaemia
CC   cells or T-cells that would cause graft versus host disease. The toxins
CC   can also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and
CC   also lower immunogenicity in humans.
XX
SQ   Sequence   251 AA;

  Query Match           96.2%;  Score 555;  DB 18;  Length 251;
  Best Local Similarity  96.2%;  Pred. No. 4.3e-59;
  Matches  100;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 SDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 60
              ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||||||
Db        148 SDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 207

Qy         61 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||||| |||||||||||||||| |
Db        208 SEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 251


RESULT 11
AAW35135
ID   AAW35135 standard; Protein; 254 AA.
XX
AC   AAW35135;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase rOnc fusion protein 11.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
PR   21-FEB-1996;   96US-0011800.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Boque L,  Newton DL,  Rybak SM,  Wlodawer A;
XX
DR   WPI; 1997-435168/40.
DR   N-PSDB; AAT94973.
XX
PT   Ribonuclease molecules based on native Onconase - used for killing
PT   cells, particularly tumour cells
XX
PS   Disclosure; Page 77; 90pp; English.
XX
CC   Sequences AAW35125 to AAW35135 represent recombinant fusion proteins
CC   (rOnc) which are modifications of the RNase Onconase (RTM) (nOnc). Such
CC   novel ribonuclease molecules are highly cytotoxic and can be used alone
CC   or to form chemical conjugates or to target recombinant immunofusions.
CC   They are used particularly for decreasing tumour cell growth. They can
CC   also be used for cell separation in vitro by selectively killing unwanted
CC   types of cells, e.g. in bone marrow prior to transplantation into a
CC   patient undergoing marrow ablation by radiation, or for killing leukaemia
CC   cells or T-cells that would cause graft versus host disease. The toxins
CC   can also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and
CC   also lower immunogenicity in humans.
XX
SQ   Sequence   254 AA;

  Query Match           96.2%;  Score 555;  DB 18;  Length 254;
  Best Local Similarity  96.2%;  Pred. No. 4.3e-59;
  Matches  100;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 SDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 60
              ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||||||
Db          2 SDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 61

Qy         61 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||||| |||||||||||||||| |
Db         62 SEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 105


RESULT 12
AAW35129
ID   AAW35129 standard; Protein; 355 AA.
XX
AC   AAW35129;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase rOnc fusion protein 5.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
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PR 21-FEB-1996; 96US-0011800.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Boque L, Newton DL, Rybak SM, Wlodawer A;
XX
DR WPI; 1997-435168/40.
DR N-PSDB; AAT94967.
XX
PT Ribonuclease molecules based on native Onconase - used for killing
PT cells, particularly tumour cells
XX
PS Disclosure; Page 71; 90pp; English.
XX
CC Sequences AAW35125 to AAW35135 represent recombinant fusion proteins
CC (rOnc) which are modifications of the RNase Onconase (RTM) (nOnc). Such
CC novel ribonuclease molecules are highly cytotoxic and can be used alone
CC or to form chemical conjugates or to target recombinant immunofusions.
CC They are used particularly for decreasing tumour cell growth. They can
CC also be used for cell separation in vitro by selectively killing unwanted
CC types of cells, e.g. in bone marrow prior to transplantation into a
CC patient undergoing marrow ablation by radiation, or for killing leukaemia
CC cells or T-cells that would cause graft versus host disease. The toxins
CC can also be used to selectively kill unwanted cells in culture. The new
CC ribonucleases have increased cytotoxic activity compared to nOnc and
CC also lower immunogenicity in humans.
XX
SQ Sequence 355 AA;

Query Match 96.2%; Score 555; DB 18; Length 355;
Best Local Similarity 96.2%; Pred. No. 6.7e-59;
Matches 100; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

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Qy          1 SDWLTFQKKELTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 60
              ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||
Db        252 SDWLTFQKKEITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 311

Qy         61 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||| |||||||||||||||||| |
Db        312 SEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 355
```

RESULT 13
AAW35133
ID AAW35133 standard; Protein; 355 AA.
XX
AC AAW35133;
XX
DT 20-APR-1998 (first entry)
XX
DE R. pipiens recombinant RNase rOnc fusion protein 9.
XX
KW RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW tumour cell growth; frog.
XX
OS Rana pipiens.
OS Synthetic.
XX
PN WO9731116-A2.
XX
PD 28-AUG-1997.
XX
PF 19-FEB-1997; 97WO-US02588.
XX
PR 21-FEB-1996; 96US-0011800.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Boque L, Newton DL, Rybak SM, Wlodawer A;
XX
DR WPI; 1997-435168/40.
DR N-PSDB; AAT94971.
XX
PT Ribonuclease molecules based on native Onconase - used for killing
PT cells, particularly tumour cells
XX
PS Disclosure; Page 75; 90pp; English.
XX
CC Sequences AAW35125 to AAW35135 represent recombinant fusion proteins
CC (rOnc) which are modifications of the RNase Onconase (RTM) (nOnc). Such
CC novel ribonuclease molecules are highly cytotoxic and can be used alone
CC or to form chemical conjugates or to target recombinant immunofusions.
CC They are used particularly for decreasing tumour cell growth. They can
CC also be used for cell separation in vitro by selectively killing unwanted
CC types of cells, e.g. in bone marrow prior to transplantation into a
CC patient undergoing marrow ablation by radiation, or for killing leukaemia
CC cells or T-cells that would cause graft versus host disease. The toxins
CC can also be used to selectively kill unwanted cells in culture. The new
CC ribonucleases have increased cytotoxic activity compared to nOnc and
CC also lower immunogenicity in humans.
XX
SQ Sequence 355 AA;

Query Match 96.2%; Score 555; DB 18; Length 355;
Best Local Similarity 96.2%; Pred. No. 6.7e-59;
Matches 100; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

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Qy          1 SDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 60
              ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||
Db          2 SDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 61

Qy         61 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||| |||||||||||||||||| |
Db         62 SEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 105
```

RESULT 14
AAW35132
ID AAW35132 standard; Protein; 366 AA.
XX
AC AAW35132;
XX
DT 20-APR-1998 (first entry)
XX
DE R. pipiens recombinant RNase rOnc fusion protein 8.
XX
KW RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW tumour cell growth; frog.
XX
OS Rana pipiens.
OS Synthetic.
XX
PN WO9731116-A2.
XX
PD 28-AUG-1997.
XX
PF 19-FEB-1997; 97WO-US02588.
XX
PR 21-FEB-1996; 96US-0011800.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Boque L, Newton DL, Rybak SM, Wlodawer A;
XX
DR WPI; 1997-435168/40.
DR N-PSDB; AAT94970.
XX
PT Ribonuclease molecules based on native Onconase - used for killing
PT cells, particularly tumour cells
XX
PS Disclosure; Page 74; 90pp; English.
XX
CC Sequences AAW35125 to AAW35135 represent recombinant fusion proteins
CC (rOnc) which are modifications of the RNase Onconase (RTM) (nOnc). Such
CC novel ribonuclease molecules are highly cytotoxic and can be used alone
CC or to form chemical conjugates or to target recombinant immunofusions.

```
CC   They are used particularly for decreasing tumour cell growth. They can
CC   also be used for cell separation in vitro by selectively killing unwanted
CC   types of cells, e.g. in bone marrow prior to transplantation into a
CC   patient undergoing marrow ablation by radiation, or for killing leukaemia
CC   cells or T-cells that would cause graft versus host disease. The toxins
CC   can also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and
CC   also lower immunogenicity in humans.
XX
SQ   Sequence   366 AA;

  Query Match             96.2%;  Score 555;  DB 18;  Length 366;
  Best Local Similarity   96.2%;  Pred. No. 7e-59;
  Matches  100;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 SDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 60
              |||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||||
Db        263 SDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 322

Qy         61 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||| |||||||||||||||| |
Db        323 SEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 366


RESULT 15
AAR12344
ID   AAR12344 standard; protein; 104 AA.
XX
AC   AAR12344;
XX
DT   08-AUG-1991  (first entry)
XX
DE   Protein with activity against cancer cells.
XX
KW   Frog eggs; Tamoxifen; Stelazine; cancer.
XX
OS   Rana pipiens.
XX
PN   WO9107435-A.
XX
PD   30-MAY-1991.
XX
PF   26-OCT-1990;   90WO-US06185.
XX
PR   18-MAY-1990;   90US-0526314.
PR   13-NOV-1989;   89US-0436141.
XX
PA   (ALFA-) ALFACELL CORP.
XX
PI   Ardelt WJ,  Mikulski SM;
XX
DR   WPI; 1991-178059/24.
XX
PT   New protein from fertilised eggs of Rana pipiens - active against
PT   cancer cells, esp. in combination with Tamoxifen or Stelazine
PT   (trifluoro-per-azine).
XX
PS   Claim 7; Fig 2; 33pp; English.
XX
CC   The protein is derived from fertilised frogg eggs. It has an iso-
CC   electric point of 9.5 - 10.5, a blocked N-terminal gp. and is free
CC   of carbohydrates.  It is active against certain cancer cells.  The
CC   combination of the protein and (z-1-p-dimethylaminoethoxyphenyl-1,
CC   2-diphenyl-1-butene) citrate salt (Tamoxifen) is much more bio-
CC   active than the separate entities against human pancreatic ASPC-1
CC   adenocarcinoma, and the combination of protein and (10-[3-(4-methyl
CC   piperazin-1-yl)-propyl]-2-trifluoromethylphenothiazine (Stelazine)
CC   is much more reactive than the separate entities against human lung
CC   A-549 carcinoma.  Activity has also been shown against human sub-
CC   maxilliary epidermoid carcinoma A-253 cells, human ovarian adeno-
CC   carcinoma NIH-OVCAR-3 cells, human leukaemic HL-60 cells, human
CC   COLO 320 DM cells, human LOX melanoma and human lung squamous car-
CC   cinoma HT-520 cells.
XX
SQ   Sequence   104 AA;

  Query Match             95.5%;  Score 551;  DB 12;  Length 104;
  Best Local Similarity   96.1%;  Pred. No. 4.2e-59;
  Matches   99;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          2 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 61
              |||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||||
Db          2 DWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 61

Qy         62 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104
              |||||||||||||||||||||| |||||||||||||||| |
Db         62 EFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 104


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Job time : 31.2 secs
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